

IN THE CLAIMS

This listing of the claim will replace all prior versions and listings of claim in the present application.

Listing of Claims

1. (currently amended)A storage resource operation managing method in a storage network arranged by a node for transmitting an access request via a network to a storage and by a storage group constituted by at least one storage resource which receives said access request so as to execute a content of the access request, said storage resource operation managing method comprising the steps of:

acquiring at least one of a logical distance and a geographical distance from at least one of, said node and said storage resource-resources contained in said storage group, and said storage resources contained in said storage group;

acquiring from said node, a requirement range with respect to at least one of said logical distances-distance and said geographical distancesdistance; and

selecting at least one storage resource for executing the access request issued from said node from said storage group, while at least one of said requirement range with respect to said logical distance and said requirement range with respect to said geographical distance is set as a selecting condition.

2. (currently amended)A storage resource operation managing method as claimed in claim 1, wherein: as said storage resource selecting condition, at least

one storage resource is selected which is located within said requirement range of at least one of said logical distance and said geographical distance.

3. (currently amended)A storage resource operation managing method as claimed in claim 2, wherein: within at least one storage resource located in said requirement range, at least such one storage resource is selected whose at least one of said logical distance and said geographical distance is closer than those of other storage resources.

4. (currently amended)A storage resource operation managing method as claimed in claim 2, wherein: within at least one storage resource located in said requirement range, at least such one storage resource is selected, the geographic distance of which is far from the geographical distance of another storage resource.

5. (currently amended)A storage resource operation managing method in a storage network arranged by a node for transmitting an access request via a network to a storage and by a storage group constituted by at least one storage resource which receives said access request so as to execute a content of the access request, said storage resource operation managing method comprising the steps of:

acquiring at least one of a logical distance and a geographical distance from at least one of said node and said storage resources contained in said storage group, and said storage resources contained in said storage group;

acquiring from said node a requirement range with respect to at least one of said logical distance and said geographical distance; and

selecting at least one storage resource for executing access request issued from said node from said storage group, while at least one of said requirement range with respect to said logical distance and said requirement range with respect to said geographical distance is set as a selecting condition, as claimed in claim 1

wherein: in such a case that the storage resource located within said requirement range is not present within said storage group, such a storage resource is selected whose at least one of said logical distance and said geographical distance is closer than those of another storage resource from said storage group.

6. (currently amended) A storage resource operation managing method in a storage network arranged by a node for transmitting an access request via a network to a storage and by a storage group constituted by at least one storage resource which receives said access request so as to execute a content of the access request, said storage resource operation managing method comprising the steps of:

acquiring at least one of a logical distance and a geographical distance from at least one of said node and said storage resources contained in said storage group, and said storage resources contained in said storage group;

acquiring from said node a requirement range with respect to at least one of said logical distance and said geographical distance; and

selecting at least one storage resource for executing access request issued from said node from said storage group, while at least one of said requirement range with respect to said logical distance and said requirement range with respect to said geographical distance is set as a selecting condition, as claimed in claim 1

wherein: in such a case that the storage resource located within said requirement range is not present within said storage group, such a storage resource is newly added whose at least one of said logical distance and said geographical distance is located within said requirement range.

7. A storage resource operation managing method as claimed in claim 1, wherein: with respect to at least a first storage resource contained in said storage group,

a requirement range with respect to a geographical distance from said first storage resource is acquired;

a second storage resource is selected from said storage group located within the requirement range with respect to said geographical distance from said first storage resource, or a second storage within the requirement range with respect to said geographical distance from said first storage resource;

copied data as to at least a data portion of such data stored in said first storage resource is stored into said second storage resource; and

in the case that an occurrence of a trouble of said first storage resource is detected, the access request issued from said node, which is transmitted to said first

storage resource, is executed with respect to said copied data of the data stored in said second storage resource.

8. (currently amended) A storage resource operation managing method as claimed in claim 1, wherein comprising the steps of:

in such a case that a geographical location of said node is changed from a first setting position to a second setting position, judging a judgement is made as to whether or not a logical distance defined from said node set at the second setting position up to such a storage resource which executes an access request transmitted by said node is located within said requirement range; and

moving data in said storage resource into another storage resource, when the logical distance from said second setting position is located within said requirement range, the data stored in said storage resource is not moved into another storage resource is beyond said requirement range.

9. (currently amended) In a storage network which is arranged by a node for transmitting an access request via a network to a storage, a storage group constituted by at least one storage resource which receives said access request so as to execute a content of the access request, and a management server, said management server comprising:

means for acquiring at least one of a logical distance and a geographical distance from at least one of, said node and said storage resource-resources

contained in said storage group, and said storage resources contained in said storage group;

means for acquiring from said node, a requirement range with respect to at least one of said logical distances distance and said geographical distance; and

means for selecting at least one storage resource for executing the access request issued from said node from said storage group, while at least one of said requirement range with respect to said logical distance and said requirement range with respect to said geographical distance is set as a selecting condition.